

LOCATION MOKULEIA

HI

Established Series

Rev. SN

02/2001

# MOKULEIA SERIES

The Mokuleia series consists of well drained soils that formed in recent alluvium deposited over coral sand. Mokuleia soils are on coastal plains and have slopes of 0 to 2 percent. The mean annual rainfall is about 40 inches and the mean annual temperature is about 74 degrees F.

**TAXONOMIC CLASS:** Clayey over sandy or sandy-skeletal, mixed, active, isohyperthermic Entic Haplustolls

**TYPICAL PEDON:** Mokuleia clay loam - pasture. (Colors are for moist soil unless otherwise noted. All textures are "apparent field textures.")

**Ap**--0 to 16 inches; very dark grayish brown (10YR 3/2) clay loam, dark grayish brown (10YR 4/2) dry; moderate very fine and fine granular and subangular blocky structure; hard, firm, sticky and plastic; common fine roots; many very fine and fine interstitial pores, few fine and very fine tubular pores; common worm holes and casts; about 25 percent coral sand; slight effervescence with hydrogen peroxide; violent effervescence with hydrochloric acid; neutral (pH 7.2); abrupt wavy boundary. (10 to 16 inches thick)

**HC1**--16 to 22 inches; dark brown (10YR 4/3) loamy sand, brown (10YR 5/3) dry; massive; soft, slightly hard; common fine roots; porous, few chunks of reef limestone; about 80 percent coral sand; violent effervescence with hydrochloric acid; moderately alkaline (pH 8.2); abrupt smooth boundary. (6 to 20 inches thick)

**HC2**--22 to 50 inches; light gray (10YR 7/2) dry and moist coral sand; single grained; loose; few fine roots; porous; few chunks of coral; violent effervescence with hydrochloric acid; moderately alkaline (pH 8.4).

**TYPE LOCATION:** Honolulu County, Hawaii; Kaena Quadrangle - 21 degrees 34' 49" north latitude and 158 degrees 10' 09" west longitude, west from Waialua High School on Farrington Highway 2.65 miles to the entrance of the Dillingham Ranch, 100 feet north and 50 feet east of the highway intersection.

**RANGE IN CHARACTERISTICS:** Depth to coral sand is commonly from 12 to 24 inches, but in some pedons is as much as 30 inches. Mean annual soil temperature is about 74 degrees F.

The A horizon has hue of 10YR through 5YR, value of 3 through 5 dry, 1 through 3 moist, and chroma of 1 through 3 dry and 1 or 2 moist. It is mainly clay loam, but some is loam or clay.

The C1 horizon has hue of 10YR or 7.5YR, value of 4 through 7 dry, 3 through 6 moist, and chroma of 1 through 3.

**COMPETING SERIES:** This is the [Keaau](#) series. It is poorly drained and underlain at moderate depth by hard consolidated coral sand or reef limestone.

**GEOGRAPHIC SETTING:** Mokuleia soils are on coastal plains at elevations from near sea level to 100 feet. Slope is 0 to 2 percent. The soils formed in recent alluvium over coral sand. Annual rainfall ranges from 20 to 80 inches but is primarily about 40 inches. Average January temperature is about 72 degrees F., average July temperature is about 78 degrees F., and average annual temperature is about 74 degrees F.

**GEOGRAPHICALLY ASSOCIATED SOILS:** These are the [Jaucas](#) soils and the competing [Keaau](#) soils. Jaucas soils are sand throughout.

**DRAINAGE AND PERMEABILITY:** Well drained; very slow runoff; moderate permeability in the A horizon and rapid in the C horizon.

**USE AND VEGETATION:** Used for irrigated sugarcane, truck crops and pasture. Natural vegetation is kiawe (*Prosopis pallida*), klu (*Acacia farnesiana*), swollen fingergrass (*Chloris inflata*), bristly foxtail (*Setaria verticillata*), koa-haole (*Leucaena glauca*), lantana (*Lantana camara*) and bermudagrass (*Cynodon dactylon*) in the drier areas and napiergrass (*Pennisetum purpurem*), guava (*Psidium guajava*), and joe (Stachytarpheta jamaicensis) in the wetter areas.

**DISTRIBUTION AND EXTENT:** Coastal plains on the Islands of Oahu and Kauai, Hawaii. The soil is about 2,800 acres extent.

**MLRA OFFICE RESPONSIBLE:** Davis, California

**SERIES ESTABLISHED:** Soil Survey of the Territory of Hawaii, 1949.

OSD scanned by SSQA. Last revised by state on 5/78.

---

National Cooperative Soil Survey  
U.S.A.